

XENOTRANSPLANTATION

(animal-to-human organ transplantation)

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Three small white silhouettes of animals (a cat, a dog, and a horse) are positioned at the bottom center of the page.

(animal-to-human organ transplantation)

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**Figure 1.** The effect of the number of nodes ( $n$ ) on the accuracy of the proposed algorithm. The error rate decreases as the number of nodes increases. The error rate is approximately 0.01 for  $n \geq 100$ .

[illegible]

- Be certain you are registered as an organ/tissue donor, carry the appropriate identification card, and convey your wishes to your family and friends.

- Ask your representatives in Congress to introduce legislation changing U.S. organ donation policies to include the alternatives listed in this brochure. Call the Federal Information Center at (800) 688-9889 to get the names of your U.S. Senators and Representative. The call is free. Write to your Representative at U.S. House of Representatives, Washington, DC 20515, and to your Senators at U.S. Senate, Washington, DC 20510.

- Contact the United Network for Organ Sharing (UNOS). Ask them to become more aggressively involved in replacing the current flawed system with better alternatives.

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American Anti-Vivisection Society

Immunology 20, 1995  
0145-887-0516

Although the medical

people waiting for

## ALTERNATIVES TO X

organ transplants

as the reason they

are pursuing

xenotransplantation,

they generally

neglect to mention

things that can

be done to

avoid the necessity

of xenotransplants

in the first place.

### Refocus rejection research:

The focus of research on organ rejection should not be on how to make the body accept animal organs. The focus should be

on the use of immunologically difficult donors

SINCE THE BEGINNING OF  
XENOTRANPLANTATION,  
HEALTH AUTHORITIES HAVE;;  
RECOGNIZED THE DANGERS  
THAT ANIMAL-TO-HUMAN  
TRANSPLANTS POSE TO  
HUMAN HEALTH

POISON

INCLUDING:

PHYS

ANIMAL

alive,

REJECTION:

Over millions of years nature developed mechanisms to prevent cross-species transmission of diseases and tissues. Xenotransplants bypass this collective evolutionary wisdom. However, even though xenotransplants have been attempted, rejection of the new animal organs has not been overcome. At present, the only way to overcome rejection is to upset the patient's immune system to such a point that transfer of disease from the animal to human becomes a distinct possibility.

F

INFECTION:

There is a very realistic possibility that xenotransplantation facilitates creation of new doomsday viruses that will remain undetected for years and cause more devastation than AIDS. All donor animal organs contain viruses or viral genetic codes which could eventually harm people.

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# XENOTRANSPLANT MYTHS AND FACTS

The heavy use of drugs to suppress the immune system in xenotransplant recipients will promote toxic

**ING :** responses and increased cancer risks. Already, many human-to-human transplant recipients need medical intervention resulting from their reaction to immunosuppressive drugs. These drugs will have to be given in much heavier doses to recipients of xenotransplants, thus leading to even more medical problems

Animal organs are unlikely to function normally in

**IOLOGY :** human recipients because they are physiologically different. For instance, fibrinogen (a blood clotting agent) is produced by the liver. However, it is unlikely that fibrinogen produced by pig livers will be able to interact properly with human blood platelets, thus causing bleeding disorders in the human recipient.

**WELFARE :** Donor animals will be raised under incredibly unnatural conditions.

They will likely be housed in sterile, stainless steel enclosures, having no interaction with other animals.

The costs of xenotransplantation will be astronomical.

**INANCIAL :** Lifelong drug therapy and periodic hospitalization, as well as the possibility of treating novel new diseases will strain our already overburdened healthcare system.

Due to the possibility that xenotransplant recipients may pass on life-threatening viruses to friends, family,

**LEGAL :** and the general public, the medical community needs to determine who is liable for a xenotransplant related plague.

## Myth #1

**There are not enough human organs to meet current clinical transplantation demands.**

### Fact #1

There is no shortage of human organs. In 1994 approximately 16,000 organs were transplanted from 5,100 donors, with 37,600 on the waiting list. The U.S. General Accounting Office (the investigative arm of Congress) identified a potential donor pool of 147,000 — more than enough to meet 1996, 1997, and 1998 clinical needs combined.

## Myth #2

**Xenotransplantation represents state-of-the-art medical science.**

### Fact #2

Xenotransplantation of organs remains pre-experimental, with a 100% failure rate. It has, however, the staggering potential -- to generate profits between \$20 and \$100 billion for the biotechnology, pharmaceutical, and medical industries. As a result, xenotransplants hold the possibility of bankrupting our health care system.

## Myth #3

**Animal organs can act as transplantation "bridges" until human organs are available.**

### Fact #3

Artificial organs are now available to act as bridges until the number of human donors increases.

## Myth #4

**Animal organs and tissues are resistant to human diseases.**

### Fact #4

Xenografts are more likely to act as sources of new, or contribute to the reactivation of old, diseases.

## Myth #5

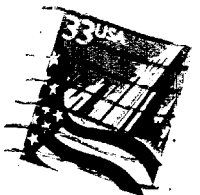
**Donor animals can be bred to be disease free and safe.**

### Fact #5

Every cell in all donor animals' bodies contains endogenous retroviral genetic material that cannot be removed by selective breeding or germ-free factory farms. AIDS is caused by a retrovirus that crossed the species barrier from monkeys and apes to humans

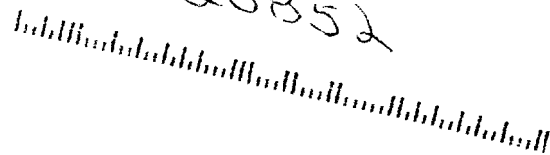
Respect  
Your  
Fellow  
Earthlings

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